



Fiscal Year 2004 President's Budget Request for NIMH

U.S. Department of Health and Human Services
National Institutes of Health

Witness appearing before the
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Mr. Chairman, and Members of the Committee,

I am pleased to present the President's budget request for the National Institute of Mental Health (NIMH) for FY 2004, a sum of \$1,382 million, which reflects an increase of \$42 million over the FY 2003 enacted level of \$1,340 million comparable for transfers proposed in the President's budget.

In my statement, I will call to your attention the immense burden on our Nation of mental and behavioral disorders. In addition, in the context of a brief review of our research activities and accomplishments, I will suggest how NIMH's expertise in behavioral science and behavioral neuroscience are contributing to the Nation's capacity to prepare for and respond effectively to the psychological impact of a bioterrorist attack.

THE BURDEN OF MENTAL ILLNESS

Mental disorders are real illnesses that are mediated by the brain and can be diagnosed reliably and accurately. Thanks to the Nation's willingness to invest generously in research, highly effective treatments exist for most mental disorders; and recovery is a realistic and attainable goal for many people who have a mental disorder. Despite our research progress, our society faces a pressing need to strengthen the quality and accessibility of clinical services for mental disorders for all who require such services. In keeping with our public health mission, NIMH assigns high priority to the task of moving information gained through research into the hands of providers, systems, patients, and families.

The Surgeon General's Report on Mental Health noted that an estimated 5.4 percent of American adults have a serious mental disorder such as schizophrenia, major depression, and bipolar in a given year, and about 5 to 9 percent of children and adolescents suffer from mental and behavioral disorders that are sufficiently severe to cause academic, social, or family impairment. Research supported and conducted by NIMH has significantly strengthened the ability of the Nation's health care providers to treat and manage these disorders; still, the public health challenge posed by mental illness remains formidable, in large part because many serious mental disorders tend to strike in childhood, adolescence and young adulthood, and to persist across much of a person's lifetime.

THE PRESIDENT'S NEW FREEDOM COMMISSION ON MENTAL HEALTH

With the release of the final report of The President's New Freedom Commission on Mental Health scheduled for this Spring, efforts to translate our science into clinical service programs will assume added importance and urgency. The Commission was charged to identify specific examples of community-based care models that are demonstrably successful in achieving desired outcomes. In its interim report, the Commission noted that much can and is being done to improve the delivery of high quality mental health care. The Commission found, however, that the national mental health care system is hampered by fragmentation of services and limited access to effective treatments. We have worked closely with the Commission over the course of its study, and look forward to helping implement its recommendations.

An ongoing collaboration between the National Institutes of Health (NIH) and the Substance Abuse and Mental Health Services Administration (SAMHSA) anticipates the Commission's interest in ensuring that individuals in every region of the

country have access to the best available treatments. NIMH, the National Institute on Drug Abuse, and the National Institute on Alcohol Abuse and Alcoholism have identified specific treatment and preventive interventions that have a strong scientific evidence base and we are working with SAMHSA officials as they develop plans to assist State agencies in implementing these interventions. Built into this initiative are processes designed to establish a systematic feedback loop that will enable researchers to draw on real world experiences with evidence-based practices to inform and guide future intervention research.

Clearly, there is a need for NIMH to advise SAMHSA of completed research that will improve the quality of care available immediately. Still, opportunities have never been greater for fundamentally revamping our approaches to developing new clinical treatments and preventive interventions. New scientific knowledge about the brain and behavior, as well as the emerging science of genomics, promises to yield new treatments for mental disorders that ultimately will alter the delivery of mental health care in far-reaching ways.

SEARCHING FOR SCHIZOPHRENIA VULNERABILITY GENES

After many years of searching, the recent discoveries of several putative vulnerability genes for schizophrenia have been among the most noteworthy achievements of the past year. Schizophrenia is a genetically complex disorder, in which multiple genes are involved, but no single one of them is sufficient or necessary to cause the disease. Rather, multiple genes, interacting with environmental influences, lead to illness. One newly discovered gene, called *G72*, plays a role in regulating the activity of glutamate, an important excitatory neurotransmitter in the brain. This is intriguing because decreased glutamate activity appears to play a key role in negative, or deficit, symptoms of schizophrenia such as social withdrawal, a lack of motivation and expressiveness, and an inability to experience pleasure. It is interesting that several of the recently discovered genes believed to be associated with susceptibility for schizophrenia may function by interfering with neurotransmitters in the prefrontal cortex (PFC) and related brain regions. For example, another newly identified gene encodes an enzyme that terminates the activity of dopamine in the PFC. In work led by an NIMH scientist, this research has identified two alleles, or variants, of this gene; one of these has been shown in clinical studies to be associated with deficits in information processing and memory, again symptoms central to schizophrenia. These discoveries highlight the biological basis for schizophrenia and may ultimately yield both diagnostic and therapeutic breakthroughs.

SCREENING FOR DRUG DISCOVERY TARGETS

One initial application of genetic discoveries will be to identify the various molecules they encode and then design medications that act on those molecules when they are implicated in various disorders. Molecular processes gone awry can serve as targets for medications designed to prevent, treat, or halt progression of a given condition. As part of an initiative included in the NIH Roadmap, NIMH is supporting research to generate a library of small molecules with novel actions that will interact with particular biological targets. Subsequent research will test these substances as candidates for the treatment of mental disorders as well as for their utility as diagnostic agents or research tools.

AUTISM

Autism represents an urgent and significant scientific and public health challenge that, given scientific opportunity and public concern, is the appropriate focus of multiple NIH Institutes. The reported incidence and prevalence of autism appears to be rising. Over the past two decades, estimates of prevalence have escalated from 1/10,000 to as many as 1/250 (for autism spectrum) to 1/400 (classic autism). A recent investigation by the Centers for Disease Control in Brick Township, New Jersey, found a prevalence rate for autism of 4.0 per 1,000 children and a rate of 6.7 per 1,000 children for the more broadly defined category of autistic spectrum disorders.

A biologically based developmental disorder, autism is characterized by qualitative impairments in social interaction and both verbal and nonverbal communication and behaviors, resulting in a markedly restricted repertoire of activities. High quality clinical care and management of children with autism can exert a draining financial toll on families.

Last year, NIMH accepted leadership of the internal NIH Autism Coordinating Committee (ACC), which operates in close communication with the larger Interagency Autism Coordinating Committee (IACC). Other NIH Institutes retain control over their own activities, such as the long-standing Collaborative Programs for Excellence in Autism (CPEAs), a network of sites funded by NICHD and NIDCD. In 2002, NIMH committed to be the primary funding source for the Studies to Advance Autism Research and Treatment (STAART) Centers program mandated by the Children's Health Act of 2000. The Institute awarded grants to develop STAART Centers, with co-funding provided by NINDS, NICHD, NIDCD, and NIEHS. Two Centers were awarded in FY 2002, and six additional Centers are slated for funding in FY2003. This will complete establishment of the network, exceeding the mandate of at least five Centers required by the Act.

Our research is yielding significant dividends. A recent study found risperidone, one of a newer class of antipsychotic medications, to be successful and well tolerated for the treatment of serious behavioral disturbance associated with autistic disorder in children aged 5 to 17. Also near completion is a study evaluating the safety and efficacy of methylphenidate (Ritalin®) for treating overactivity, impulsivity, and distractibility in children with autism spectrum disorders.

PSYCHOLOGICAL IMPACT OF BIOTERRORISM

In light of the maxim that "the purpose of terror is to terrorize," prudence dictates that we use research not only to treat the consequences of terrorism, but also to help refine our ability to triage those individuals likely to be most susceptible to serious adverse neurobiological responses to a bioterrorist attack and, to the extent possible, to "innoculate" the population against destabilizing or unwarranted anxiety or panic. Over many decades, NIMH has supported a robust behavioral science research portfolio that has informed us about many basic behavioral mechanisms, including those influencing group processes. More recently, we have supported studies that have examined the psychological impact of natural disasters such as floods and tornados, and the terrorist attacks in Oklahoma City in 1995 and on September 11, 2001. Behavioral science and clinical research not only provide a "top-down" systems-level context to help us understand what is happening at molecular and cellular levels in the brain in the face of overwhelming fear and anxiety, but also can help us to prepare for and treat the psychological and social consequences of such events.

A key finding of this research to date is that people are very resilient—the vast majority of victims of mass disaster and terrorist attack do not develop a psychiatric disorder. For those individuals who do, the most frequent adverse outcome is post-traumatic stress disorder, or PTSD. This is a form of anxiety disorder that occurs after exposure to an extreme stressor in which an individual experiences, witnesses, or is confronted with actual or threatened death or serious injury to self or others. Given its prevalence, disabling impact, chronicity, and treatment resistance, PTSD represents a major public health concern.

Through the research we have conducted, however, we are gaining an increasingly clear understanding of what variety of psychological and behavioral problems to expect in the event of an attack and the types of services that will be needed. We know that we should expect to see increases in requests for therapy and medications for common and troubling symptoms of fear, anxiety, hyperarousal, and sleep problems. We know that survivors—particularly those with PTSD and others who may have a comorbid, or co-occurring mental disorder—actively use mental health services. In the event of a future attack, as we move beyond needs for first aid, housing, and food, the majority of those people who were directly affected will need supportive counseling and assistance to resume normal activities such as household routines, school, and work.

Research that has examined the use of mental health interventions speaks to the clinical significance of subjective distress even in subjects without recognized psychiatric disorders. We also have information about who is most likely to be at risk for developing longer-term problems and, thus, as people present to health, educational and social service programs for a variety of physical and mental health problems, it will be important to apply what we know with the aim of preventing such problems. I would also note that we are drawing on behavioral science research involving the coping response to threat to advise individuals and communities how to anticipate and lessen the emotional burden caused by trauma. It is clear that the availability of accurate information, including information about health risk, for example, blunts the anxiety- and panic-provoking nature of unjustified speculation about risk and permits people to decide on action that they can take. Research on basic behavioral processes involved in decision-making, judgment, and health risk assessment—all involved in shaping attitudes, affect, and behavior—is very useful in shaping the messages we convey to our citizens.

I will be pleased to answer any questions.